ASSESSING RELATIONSHIP OF PSYCHOLOGICAL CONSTRUCTS ON HUMAN CAPITAL FORMATION WITH REFERENCE TO SELECT UNIVERSITIES OF INDIA

A

Synopsis

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SECTION 1

1 INTRODUCTION

"The most valuable of all capital is that invested in human beings – Human Capital"

- Alfred Marshall

"Education is the most powerful weapon which you can use to change the world"

- Nelson Mandela

In the recent decade, the management of organizations has found that human resources have the greatest importance in gaining sustainable competitive advantage and efficiency. In the world where knowledge and communication with customers have gained increasing importance, human capital, which shows the volume of knowledge, education, training, intelligence, technical skills, creativity, and experience of the organization, gains great importance, employers value such as loyalty and punctuality. Thus labour force is considered as productive assets not costly assets (Hendricks, 2002). It is an intangible asset not listed on a company's balance sheet. Since all labor is not considered equal, employers can improve human capital by investing in the training, education, and benefits of their employees. Improving employees' human capital will result in higher morale, increased productivity and a sense of belonging to a firm. Human capital is perceived to have a relationship with economic growth, productivity, and profitability. Like any other asset, human capital can depreciate through long periods of unemployment, and the inability to keep up with technology and innovation.

The idea of human capital can be traced back to the 18th century. Adam Smith referred to the concept in his book "An Inquiry into the Nature and Causes of the Wealth of Nations," in which he explored the wealth, knowledge, training, talents, and experiences for a nation. Adam suggests that improving human capital through training and education leads to a more profitable enterprise, which adds to the collective wealth of society. According to Smith, that makes it a win for everyone. The effective use of physical capital itself is dependent upon human capital. Many economists have pointed out that the Third World countries have remained underdeveloped for want of adequate amount & appropriate quality of human capital. For instance, the masses in these countries are either illiterate or there level of education is very low; most of them are unskilled & untrained & their general health is very poor.

Therefore, large scale investment in human capital is needed if physical capital available to these countries is to be exploited in a more efficient way.

1.1 Approaches to Human Capital Measurement

Organisation for Economic Co-operation and Development (OECD, 1998) suggests that Human Capital can be measured in three ways as follows:

- The Schooling approach,
- The Testing people competencies approach and
- Achievement Indicators approach

1.1.1 The Schooling approach: This approach considers human capital is measured by looking at the number of years of formal education gained by the population. The advantage of this approach is that it can be used to compare the stocks and flows of human capital between different countries and different sectors. This approach has the limitation of assuming that the learning capabilities of the population to gain knowledge are the same. Thus, people with schooling should acquire identical knowledge. But, this is far from the real situation, since learning capabilities differ substantially among individuals and knowledge gained during similar years of education must be different.

1.1.2 The Testing people competences approach: In this method, the human capital is measured by the testing the competencies of the people when they perform a specific job. This method is used often in areas where people's knowledge, skills and competencies are well defined. Testing the people competences requires the application of specialized surveys including a wide definition of the different domains of the skills that will be tested.

1.1.3 Achievement Indicators approach: This approach attempts to measure human capital by looking at its economic attainments. This method assumes that different levels of education attained by people may be reflected by several indicators such as personal productivity, personal income, job security, occupational status and so on. Human capital expansively includes the meaning of 'human as creator' who frames knowledge, skills, competency and experience originated by continuously connecting between 'self' and 'environment'.

The impact of human capital is broadly categorised into three parts – individual, organisation and society. At individual level, human capital is the possibility of increasing individual income, resulting

from the individual productivity. At organisational level, Lepak and Snell (1999) suggest that the potential of human capital is closely linked to core competencies and competitiveness of organisation. At societal level, McMahon (1999) depicts that the possibility of human capital for democracy, human rights and political stability on common consciousness of social constituents. Beach (2009) suggests that human capital can increase social consciousness of constituents within community.

Education and Health are the two primary components of Human Capital Formation. Education is a key driver in forming Human Capital. Considerable research has been done on human capital formation especially in the aspect of education with different perspectives. It is evident that there is a need for skilled human capital. There will be an increasing need for high quality human capital that can operate in all the sectors. Several studies have focused on the knowledge based economy. It has been proven that over a period of time, knowledge based economy develops. Becker (1975) suggests that the most important investments in human capital are education and training. Further, the education system of a country can act as an indicator of the quality of its human capital. In times of complexities and criticalities, employees with strong educational background serve as promising solutions (Rick, 2002). Education plays a vital role. You're concentration on Education the more you can defend your organization in times of unexpected adversities. There is a significant link between employees education and employees performance via its efficient human capital.

The psychological constructs like emotional intelligence has been defined as "the ability to monitor one's own and other people's emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behavior" by Peter Salovey and John Mayer. The term first appeared in 1964 paper by Michael Beldoch. This definition was later broken down and refined into four proposed abilities: perceiving, using, understanding, and managing emotions. Employees must be motivated from time to time for them to work harder even next time and for others to draw inspiration from them. The talents of good employees must be recognized either by offering them lucrative incentives or giving them a decent salary hike.

According to (Cooper, 1997) research attests that people with high levels of emotional intelligence experience more career success, build stronger personal relationships, lead more effectively, and enjoy better health than those with low Emotional Quotient. The reason is more emotionally intelligent

individuals presumably succeed at communicating their ideas, goals, and intentions in interesting and assertive ways, thus making others feel better suited to the occupational environment (Goleman, 1998). Finally, EI is claimed to influence one's ability to succeed in coping with environmental demands and pressures, clearly an important set of behaviors to harness under stressful work conditions.

The other construct perceived organizational support shown in organisations when employer contributes and cares about employee well-being it will increase employee POS, which in turn, will lead to positive employee attitudes and behaviors. Further, it is also proposed that employees' professional commitment will interact with POS to influence the outcomes. Employees with higher levels of POS are more likely to repay the organization with positive attitudes and favorable work behaviors (Eisenberger et al., 1986) Research universities being knowledge-driven organizations are primarily involved in learning and knowledge creation, developing, preserving and dissemination through publications and therefore play a vital role in the economic growth and development of a country by generating new ideas (Roger Fullwood, 2017). Higher education institutions (HEIs) or research universities can improve their processes and services such as teaching, learning, research, curriculum development, administration and strategic planning through effective Human capital management.

The researches in the field of relationship of psychological constructs towards human capital formation are also very limited in Indian context. The Universities around the world are dealing with increasing competition, changing ways of university governance due to the rise of neo-liberal policies in higher education, shift from teacher driven to student driven learning model and pressures of accountability towards the society. This calls for a fundamental reform in the overall purpose and functioning of higher education and contribution of universities towards knowledge economy. This provides a strong vision to the present study and also constitutes the major research question that can human of universities with their organisational support, emotional intelligence, satisfaction and motivation affect their operative performance and thereby act as a catalyst in taking India towards the establishment of sustained competitive advantage by human capital formation? In order to carry the research further, three universities have been selected by the researcher in India.

SECTION 2

2 OVERVIEW OF HIGHER EDUCATION SECTOR IN INDIA

"Education has to produce the perfect man – Sound in character, active in mind and Strong in body" -Plato

The essence of Human Resource Development is education, which plays a significant and remedial role in balancing the socio-economic fabric of the country. Since citizens of India are its most valuable resource, our billion-strong nation needs the nurture and care in the form of basic education to achieve a better quality of life. This warrants an all-round development of the citizens, which can be achieved by building strong foundations in education. In pursuance of this mission, **Ministry of Human Resource Development (MHRD)** was created on September 26, 1985, through the 174th amendment to the Government of India (Allocation of Business) Rules, 1961. Currently, the MHRD works through two departments:

(a). Department of School Education & Literacy (b). Department of Higher Education

While the Department of School Education & Literacy is responsible for development of school education and literacy in the country**, Department of Higher Education** takes care of what is one of the largest Higher Education systems of the world, after the United States and China.

The higher education system in India includes private and public universities. Public universities are supported by the Government of India and the state governments, while private universities are supported by various bodies and societies. Universities are recognized by the University Grants Commission (UGC), which draws its power from the University Grants Commission Act, 1956. In addition, 16 Professional Councils are established, controlling different aspects of accreditation and coordination. The types of universities controlled by the UGC include Central universities, State universities, Deemed universities and Private universities.

In addition to the above universities, other institutions are granted the permission to autonomously award degrees, and while not called "university" by name, they act as such. They usually fall under the administrative control of the Department of Higher Education. In official documents they are called "autonomous bodies", "university-level institutions" or even simply "other central institutions".

University Grants Commission Act says that only universities **set up** by **Parliament or a state legislature**, and those **declared** deemed universities by the government, can award degrees.

The types of universities include:

- **Central Universities**, or Union universities, are established by an Act of Parliament and are under the purview of the Department of Higher Education in the Union Human Resource Development Ministry. As of 12 December 2018, The list of central universities published by the UGC includes 49 central universities.
- **State Universities** are run by the state government of each of the states and territories of India and are usually established by a local legislative assembly act. As of 6 October 2017, the UGC lists 367 state universities. The oldest establishment date listed by the UGC is 1857, shared by the University of Mumbai, the University of Madras and the University of Calcutta. Most State Universities are affiliating universities in that they administer a large number of affiliated colleges (many located in very small towns) that typically offer a range of undergraduate courses, but may also offer post-graduate courses. More established colleges may even offer Ph.D. programs in some departments with the approval of the affiliating university.
- **Deemed to be University**, or "Deemed to be University", is a status of autonomy granted by the Department of Higher Education on the advice of the UGC, under Section 3 of the UGC Act. As of 6 October 2017, the UGC lists 123 deemed universities. According to this list, the first institute to be granted deemed university status was Indian Institute of Science, which was granted this status on 12 May 1958. In many cases, the same listing by the UGC covers several institutes. For example, the listing for Homi Bhabha National Institute covers the Institute of Mathematical Sciences, the Indira Gandhi Centre for Atomic Research and other institutes.
- **Private Universities** are approved by the UGC. They can grant degrees but they are not allowed to have off-campus affiliated colleges. As of 6 October 2017, the UGC list of private universities lists 282 universities.

Table 1. Total number of universities in India as on 29 June 2017

UNIVERSITIES	TOTAL NUMBER
Central Universities	49
State Universities	367
Private Universities	282
Deemed Universities	123
TOTAL	**821**

Source*: www.ugc.ac.in*

Led by Indian Institute of Science (IISc) in Bangalore, India has a record 49 institutions among the best universities in the world, according to the Times Higher Education (THE) World University Rankings 2019 published 28-08-2019.

While IISc remained the top school from the country, the Indian list saw some fresh names including the newly established Indian Institute of Technology in Indore (IIT Indore) making an impressive debut in the global rankings. However, all Indian institutes are outside the top 200 global list that was topped by Oxford University.

While IISc was kept in the 250-300 ranking cohort, IIT Indore made its debut with a presence in the 351-400 best universities group ahead of established IITs in Delhi, Madras and Mumbai.

IIT Bombay with a global ranking in the 401-500 groups is the third best from India and has slipped in the latest ranking by 50 places when compared with its previous ranking. IIT Roorkee, however, improved its ranking by 100 places to be clubbed in the same group as IIT Bombay. After the top 200 list, THE does not assign individual rankings to universities but club them in groups. Pradeep Mathur, director of IIT Indore said his institute has been focusing on research by investing in research facilities, providing incentives for publications and patents, and recruiting committed researchers.

Besides, three new IITs and two Indian Institute of Science Education and Research (IISER) have found a place among the top 1,000 universities in the world. This in a way reduces apprehension about whether new institutes established by government will be able be catch up with their old peers.

2.1 Selection of Universities for the study

The sample for the present study is dependent upon ranking by Ranking web of universities, Jiwaji University has 163rd rank in country and 3605th in world, GLA has 411th rank in country and in world

7840th rank and AMU has 16th rank in country and in world 1299th rank. So these universities need high amount of improvements in their competencies to get higher rankings in ranking scales for gaining competitive advantage. Thus, these three universities are selected to conduct the proposed study from Uttar Pradesh and Madhya Pradesh.

Table 2. Rankings of Jiwaji University, GLA University and AMU

University	Country rank	World rank
Jiwaji University	163	3605
GLA University	411	7840
AMU	16	1299

Source: https://www.webometrics.info/en/asia/india?page=4

2.1.1 Jiwaji University

Jiwaji University is a public university which is located in Madhya Pradesh at Gwalior. It offers a wide variety of courses in streams like Commerce, Management, Science, and Business Administration at undergraduate, postgraduate and doctorate levels. It has established in 1964 as state university. Its accreditation is NAAC-'A' Grade. It has 485 affiliated colleges. As per QS Ranking 2020, the university has been ranked 88 in the overall category in India.

2.1.2 GLA University

GLA University is a private recognized university approved by the AICTE, located in Mathura Uttar Pradesh. GLA University, Mathura is approved and recognized by University Grants Commission (UGC), NCTE and Pharmacy Council of India. It has been accredited by the National Assessment and Accreditation Council (NAAC) with 'A' Grade.

GLA University was started with the establishment of GLA Institute of Technology & Management offering B.Tech and MCA programs, in the year 1998 by the current Chancellor Mr. Narayan Das Agrawal. In the year 1999, MBA program was introduced with 60 seats. The GLA University, Mathura is managed by GLA Group of Institutions that later, in 2010, grew to become the GLA University through the U.P. State Legislative Act of 2009 (UP Act 21 of 2010) The Institutes under the university are:

- Institute of Engineering and Technology
- Institute of Applied Science and Humanities

- Institute of Business Management
- Institute of Pharmaceutical Research
- University of Polytechnic
- Faculty of Education
- Institute of Legal Studies

2.1.3 Aligarh Muslim University

Aligarh Muslim University (**AMU**) is an Indian public central university. It was originally established by Sir Syed Ahmad Khan as Muhammadan Anglo-Oriental College in 1875. Its chief architect was Nawab SarwarJung. The Muhammadan Anglo-Oriental College became Aligarh Muslim University in 1920. The university offers more than 300 courses in both traditional and modern branches of education.

Internationally, AMU was ranked 801-1000 in the *QS World University Rankings* of 2018. The same rankings ranked it 238 in Asia and 161-170 among BRICS nations. It was ranked 601-800 in the world by the *Times Higher Education World University Rankings* of 2018, 158 in Asia and 157 among BRICS & Emerging Economies in 2017.

Among engineering colleges, the Zakir Hussain College of Engineering & Technology, the engineering college of the university, was ranked 17th by *India Today* in 2017 and 40th by the *National Institutional Ranking Framework* among engineering colleges in 2017.

The Faculty of Law has ranked 2nd in India by *India Today* in 2017. The Jawaharlal Nehru Medical College, the medical school of the university, has been ranked 8th by *India Today* in 2017. The University has 12 Faculties viz. Agricultural Sciences, Arts, Commerce, Engineering & Technology, Law, Life Sciences, Medicine, Management Studies & Research, Science, Social Sciences, Theology, Unani Medicine, each comprising of several Departments of Studies.

SECTION 3

3 LITERATURE REVIEW

For the purpose of the study, a detailed review of literature is conducted on the various dimensions of emotional intelligence, perceived organizational support, Satisfaction and motivation to identify its impact on human capital formation also considering the moderating demographic variables.

3.1 Intellectual Capital

The term intellectual capital was first proposed by Galbraith, as a form of knowledge, intellect, and brainpower activity that uses knowledge to create value. Intellectual capital (IC) represents the conversion of knowledge into value for a firm. Thus, intellectual assets (people, patents, process, and brand name) are the "debit" and intellectual capital is the "credit" or the equity invested in intellectual assets.

Intellectual capital is intangible and cannot be accurately measured. For example, Frykman & Tolleryd (2010) define intellectual capital as all non-financial assets of a company that are not reflected in the balance sheet. Yet Tawy & Tollington (2012) have observed that there is no universal definition for intellectual capital and the cause and effect relationship between intellectual capital and value creation is, at best, indirect. Bayburina & Golovko (2009) emphasized that intellectual capital is the "intangible safety - cushion", which can be used only by companies who have created it years before.

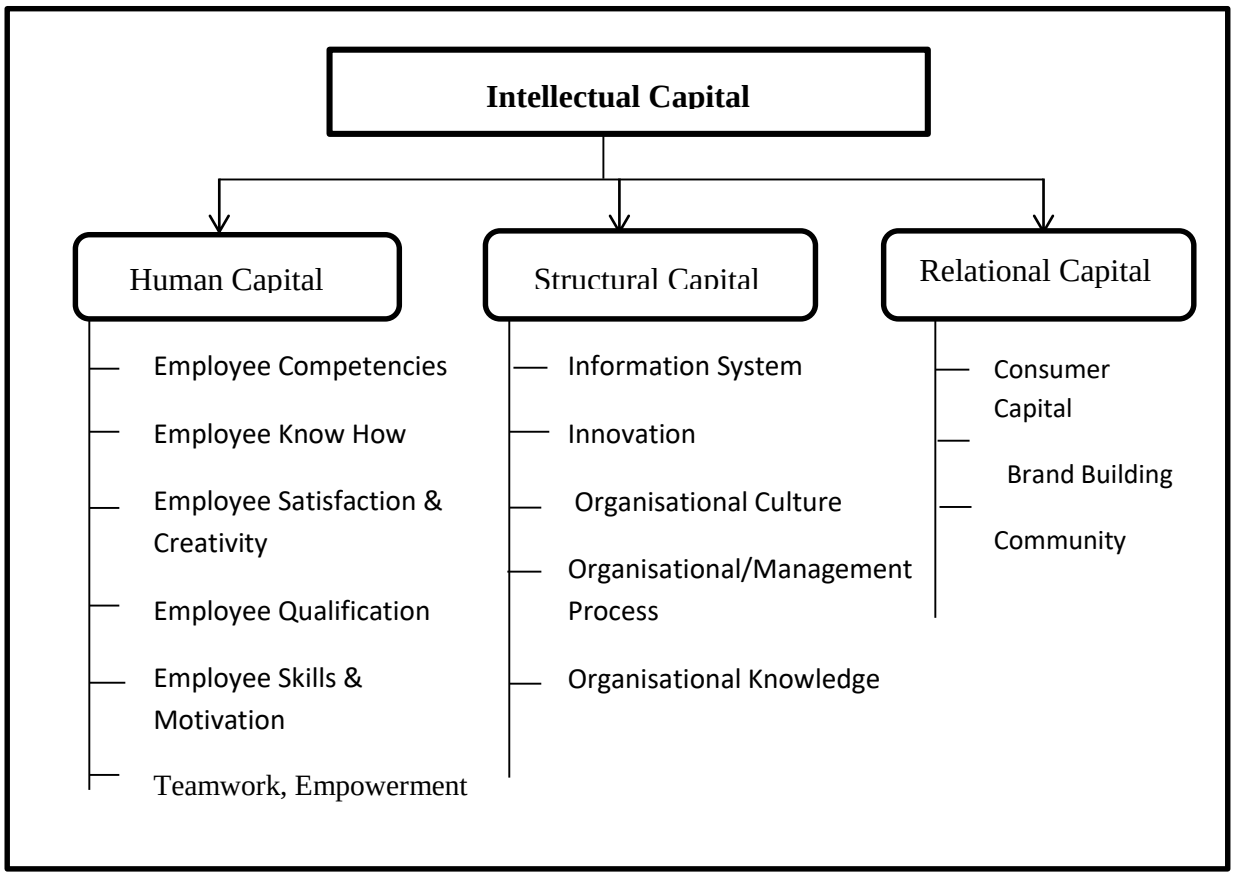

Figure 1: Hierarchy of Components of Intellectual Capital

Source: Author's Compilation

Therefore it is necessary to focus on sustainable development. The panel data analysis of before mentioned study revealed that the human capital can be considered the key factor of the long-term growth of BRIC companies. Brown et al. (2005) emphasize that intellectual capital has ascertainable monetary value, provides a company with a competitive edge and enables it to differentiate itself from its competitors.

Since, human capital and relational capital can be transient, companies must strive to covert managing intellectual capital is almost synonymous with managing a new economy firm. Just as the proportion of intellectual capital to book value of a knowledge firm is much larger than in a traditional firm, the management of the firm should also be weighing their efforts towards evaluating, building, and nurturing knowledge assets.

The importance of intellectual capital in a knowledge-based economy is widely accepted; Stewart pointed out that intellectual capital is referred as to the accumulation of all knowledge, skills, and expertise of employees that can lead to competitive advantages. In the same way, Edvinsson and Sullivan argue that intellectual capital is essentially defined as the knowledge assets that can be converted into value. In addition, Bontis illustrated that intellectual capital comprises three components: human capital, customer capital, and structural capital. Moreover, researchers argued that intellectual capital is mainly based on intangible assets, for example, knowledge, skills of employees, customer satisfaction, loyalty, policies, procedures, social value, intellectual property, industrial property, faith, ethics, etc.

Human capital is mainly based on individual abilities, knowledge, know-how, talent, education, skills and experiences of employees in organizations. Human capital is the most important component of intellectual capital, and it is critical for creativity and innovation. Snell argued that human capital is creative, bright, and skilled employees with expertise in their functions. Human capital refers to processes that relate to training, education, and other professional initiatives in order to increase the levels of knowledge, skills, abilities, values, and social assets of an employee, which will lead to the employee satisfaction and performance, and eventually improve firm performance. Rastogi stated that human capital is an important input for organizations, especially for employees' continuous improvement mainly in knowledge, skills, and abilities. Thus, the definition of human capital is

referred to as “the knowledge, skills, competencies, and attributes embodied in individuals that facilitate the creation of personal, social, and economic well-being.” Human capital focuses on two main components: individuals and organizations.

Nerdrum and Erikson (2001) proposed that intellectual capital is an individual’s complimentary capacity to generate added value and thus create wealth. This provides a fresh perspective for assessing the present and future value of organizations. Intellectual capital researchers opine that identifying and valuing intellectual capital is increasingly important for knowledge-intensive organizations (Mondal and Ghosh, 2012).

3.1.1 Dimensions of Intellectual Capital

Bontis, 1998; Bontis et al., 2000; Canibano and Sanchez, 2009; Komnenic and Pokrajcic, 2012; Mondal and Ghosh, 2012; Ramirez and Gordillo, 2014; Vishnu and Gupta, 2014, have proposed the widely accepted three dimensions: human, organizational and relational. In this research we propose to include one dimension i.e: human capital.

3.1.1.1 Human Capital (HC)

Human Capital encompasses the knowledge, skills and attitudes that workers possess (Youndt & Snell, 2004). A qualified workforce produces better results in organizational performance through the appropriate development of employees' talent, which enhances employees' engagement and motivation in the long term. Essence of human capital is the sheer intelligence of organizational members (Bontis, 1998). Human capital is a strategic resource that contributes to the creation of a competitive advantage and underpins its sustainability (Carmeli, 2004). Empirical evidence shows human capital to be a significant factor determining growth across countries and explaining cross country productivity differences (Ang et al., 2011; Banerjee and Roy, 2014; Barro, 1991; Goldin 2001). Previous studies have revealed the positive effect of human capital on organizational performance (Carmeli, 2004; Hsu, 2008). Since, human capital is not owned by the organization, therefore, with the departure of the employees, this capital is also withdrawn. Moreover, in context to universities, Teodorescu (2006) made similar observations and said that institutional researchers play the most important role in generating, managing and transferring knowledge in universities.

Nguyen (2016) in a recent study went further and proposed effective research based HRM policies in universities to motivate the academics to improve research performance. . Likewise, Townsend et al. (2015) tried to explore the structural policies that are needed to foster interdisciplinary research efforts at a university in UK and concluded that leadership is important, if interdisciplinarity is to thrive. Unlike the above studies which focused majorly on research, Chang et al. (2015) took a different perspective by advocating a balance between teaching and research to achieve excellence and establishing world class universities. But, these studies overlooked the role that human capital plays in stimulating university performance by converting an institutional researcher's skills into knowledge, motivation into improved research and interdisciplinary research into performance, thus achieving the objective of excellence. Jones (1979) studied human capital as one of the important hypothesis to understand students' view of the roles of university. It was concluded that students view the role of a university through the lens of their discipline. This research studied human capital from the perspective of students, while the proposed study shall attempt to explore the construct from the perspective of the faculty, who are the generators and managers of knowledge in universities. Another set of studies was made in context to research universities and their contribution towards knowledge economy particularly with respect to developing countries. (Altbach, 2013; Postiglione and Arimoto, 2015; Postiglione, 2013; Shin and Lee, 2015). This provides further impetus to the proposed research as India is a developing country and due to the massive expansion in its higher education sector, it can be leveraged as a major contributor towards knowledge economy.

The studies mentioned above, talked of globalization and internationalization through academic productivity, innovation and quality research but overlooked the role of human capital generated in the whole process. Present study shall seem to extend these ideas and understand the contribution of human capital in the process of creating a knowledge economy. By far most studies on human capital have focused on its strategic importance in organizations, relation with organizational innovativeness, influence on social capital and level of innovation where organizational performance has been used as a generic term. However, there are very few studies on human capital, university performance and knowledge economy especially in context of the Indian higher education sector.

With the beginning of the new millennium it has become more and more apparent that education and human capital constitute a key element of modern economies. It has been established that human capital plays a significant role in enhancing university performance. So, it is pertinent that decision makers at universities concentrate on factors that help in stimulating its human capital aspects. Factors like research facilitation, providing employees with a quality work life, inducing faculty commitment and having a policy of non-discrimination as far as employment is concerned, emerged as the underpinnings of strong human capital. As discussed earlier in the study, the popularity of neo-liberal policies in the higher education sector calls for an intense focus on retaining talented academicians at workplace. This is possible only when universities have regular policies in place regarding internal promotions, mentoring new faculty and a conducive physical and emotional environment at work. This will help to bring out the best in people and go a long way in engaging them positively at work.

Despite the important role of human capital in modern societies, there are still many unknowns about the process of educational production as well as individual and collective decisions concerning how much and what kind of education to obtain. This literature review aims at evolving a better understanding of the process of human capital formation and educational attainment.

3.2 Emotional Intelligence

The concept of Emotional Intelligence dates back to the work of Howard Gardner in 1983 who mentioned constellation of Intelligences including logical, linguistic, bodily, musical, interpersonal, etc. in his book. Emotional Intelligence was found to be simply different from 'being emotional' since an emotional person may feel or act more intensely than others while an emotionally intelligent person is able to recognize and use emotions productively.

Emotional intelligence is a psychological characteristic and pertains to how an individual reason about and with emotions; it includes four component abilities or branches (Mayer & Salovey, 1997): **Perceiving emotions:** ability to accurately identify emotional content, **Using emotions:** concerns the utilization of emotion as information to assist thinking and decision making, **Understanding emotions:** involves adequately labelling emotions and understanding their progression, and, **Managing emotions:** pertains to effective managing of feelings in oneself and others to enhance well-being in self and others.

Researchers over the past decades have suggested emotions lead investors to make mistakes while perceiving risk and are unavoidable component of human decision-making. (Schwarz & Clore, 1983; Finucane et al., 2000; Loewenstein, Weber, Hsee & Welch, 2001) since investors rely on heuristics and cognitive shortcuts as opposed to expected utility theory and fall prey to their affective reactions. (Finucane, Alhakami, Slovic, & Johnson, 2000; Kahneman & Tversky, 1974) and tend to play safe as they are loss averse and anticipate regret for negative outcome. (Kahneman & Tversky, 1979; Shefrin & Statman, 1985; Benartzi & Thaler, 1995; Stracca, 2004; Shiv, Loewenstein, Bechara et al., 2005; Statman, Fisher & Anginer, 2008).

The quality of decisions based on heuristics or emotions tend to get influenced from the situational factors. (Lichtenstein & Slovic, 1971; Tversky & Kahneman, 1981; Hsee, Loewenstein, Blount, & Bazerman, 1999). Inspired by the ideas, Peter Salovey along with his colleagues worked upon the implications of Emotional Intelligence in multiple domains followed by devising measures to test for the same. Their research brought a shift on using moods and emotions in an advantageous manner since they form the central tenants of the emotional intelligence. (Goleman, 1998; Mayer, Salovey & Caruso, 1998).

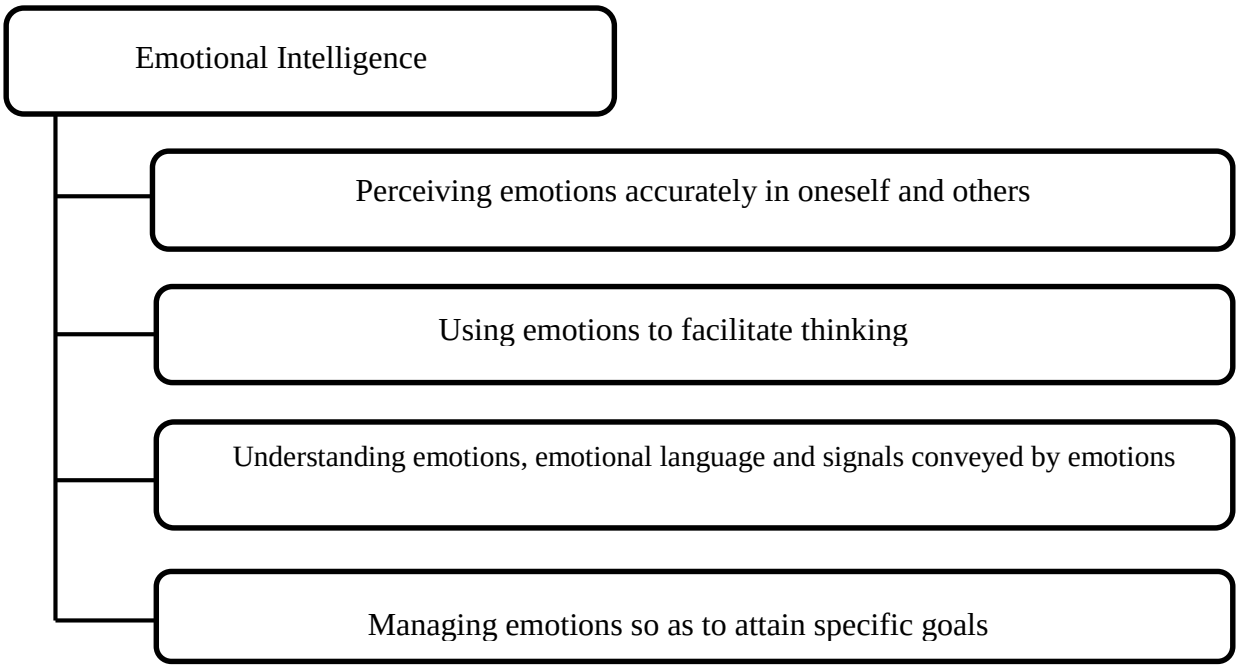
Emotional Intelligence
Perceiving emotions accurately in oneself and others
Using emotions to facilitate thinking
Understanding emotions, emotional language and signals conveyed by emotions
Managing emotions so as to attain specific goals

Figure 2 - Four Branch Model of Emotional Intelligence (Source: Mayer & Salovey, 1997)

Emotional Intelligence allows one able to use and integrate his moods and emotions effectively to reap the potential benefits of the cues (Mayer & Salovey, 1999). In 2001, Peter Salovey in a chapter entitled “Applied Emotional Intelligence: Regulating Emotions to Become Healthy, Wealthy, and Wise”, suggested that Emotional Intelligence should also play an important role in financial decision making. The suggestion was supported by Charles Ellis- a financial expert and author of several books stated that emotions are widespread in the domain of financial decision making, and individuals who are emotionally intelligent should be better investors.

Given the pervasiveness of moods and emotions in all spheres of life (including financial decision making), the concept of Emotional Intelligence is gaining in acceptance and the definitions, research, and measures of Emotional Intelligence are becoming more erudite over time. (Mayer, Roberts & Barsade, 2008).

3.2.1 A Brief History of Emotional Intelligence

1930s – Edward Thorndike describes the concept of "social intelligence" as the ability to get along with other people. 1940s – David Wechsler suggests that affective components of intelligence may be essential to success in life. 1950s – Humanistic psychologists such as Abraham Maslow describe how people can build emotional strength. 1975 - Howard Gardner publishes The Shattered Mind, which introduces the concept of multiple intelligences. 1985 - Wayne Payne introduces the term emotional intelligence in his doctoral dissertation entitled "A study of emotion: developing emotional intelligence; self-integration; relating to fear, pain and desire (theory, structure of reality, problem-solving, contraction/expansion and tuning in/coming out/letting go)." 1987 – In an article published in Mensa Magazine, Keith Beasley uses the term "emotional quotient." It has been suggested that this is the first published use of the term, although Reuven Bar-On claims to have used the term in an unpublished version of his graduate thesis. 1990 – Psychologists Peter Salovey and John Mayer publish their landmark article, "Emotional Intelligence," in the journal Imagination, Cognition, and Personality. 1995 - The concept of emotional intelligence is popularized after publication of

psychologist and New York Times science writer Daniel Goleman's book Emotional Intelligence: Why It Can Matter More Than IQ.

3.3 Perceived Organisational Support

Organisational support theory (Eisenberger et al., 1986; Rhoades and Eisenberger, 2002) appears to be a useful theoretical framework for individual entrepreneurial behavior in organisations. Within this framework, employees develop high levels of Perceived Organisational Support (POS), when the organisation cares about their well-being and values their contributions (Rhoades and Eisenberger, 2002). Consistent with Organisational support theory proposition, research reveals that employees with high levels of POS are more committed to the organisations they work for and more satisfied with their jobs (Rhoades and Eisenberger, 2002). Such employees are less likely to be absent or resign (Eisenberger et al., 1986); are more likely to go ''above and beyond'' formal job duties and have higher in-role performance (Armeli et al., 1998; George and Brief, 1992; Rhoades and Eisenberger, 2002). However, despite the acknowledged importance of POS to outcomes that are favourable to both employees and the organisation, empirical research on the potential influence of POS on entrepreneurial behaviour within organisations is scarce. Thus, one of the aim of the present study is to examine the effect of POS on the enhancement of human capital of employees working in organisations.

However, the mechanisms by which POS exerts influence on employee attitudes and behaviours at work and moderating influences that constitute boundary conditions of the theory are in need of further investigation (Rhoades and Eisenberger, 2002). Organisation tenure (Sturman, 2003), that is, the amount of time an employee has spent working for the same organisation, is a potential moderator of the relationship between POS and human capital. Recently, both academics and practitioners are interested in whether tenure inhibits or contributes to important organisational variables (such as employee job performance, satisfaction, leadership etc.) and whether there is an optimum level of tenure for promoting such variables (Sturman, 2003). Furthermore, there has been surprisingly little academic and empirical research on the potential influences of organization tenure on entrepreneurial behavior and human capital formation. A systematic consideration of the potential moderating effects of tenure will contribute to a fuller understanding of the conditions under which the effects of POS on

human capital are more likely to hold. Hence, a second major purpose of the proposed present study shall focus on employees' organisation tenure as a potential moderator of the relationship between POS and development of human capital.

3.4 Job Satisfaction

Job satisfaction is an intangible variable. It consists of a number of complex variables, conditions, feelings and behavioural tendencies. Robert Dictionary of Industrial Relations defined job satisfaction as those outward or inner manifestations which gave the individual a sense of enjoyment or accomplishment in the performance of his work.

3.4.1 Determinants of Job Satisfaction

Job satisfaction is intangible and it is multi-variable. A number of factors influence job satisfaction of employees. They can be classified into two categories: Organizational and Personal variables.

3.4.1.1 Organizational Determinants:

Employees spend most of the time in organizations. Therefore, a number of organizational factors determine job satisfaction of the employees.

Wages: Wage is the amount of reward worker expects from the job. It is an instrument of fulfilling the needs. A feeling of fair and equitable reward produces job satisfaction.

Nature of Work: The nature of work has significant impact on the job satisfaction. Jobs involving intelligence, skills, abilities, challenges and scope for greater freedom make the employee satisfied on the job.

Working Conditions: Good workings conditions are needed to motivate the employees. They provide a feeling of safety, comfort and motivation.

Job Content: Job content refers to the factors such as recognition, responsibilit y, advancement, achievement etc. Jobs involve variety of tasks and less repetitive result for greater job satisfaction.

Organizational Level: Higher level jobs are viewed as prestigious, esteemed and as an opportunity for self-control. Employees working at higher level jobs express greater job satisfaction than the lower level jobs.

Opportunities for Promotion: Promotion is an achievement in the life. Promotion gives more pay, responsibility, authority, independence and status.

Work Group: Existence of groups in organizations is a common phenomenon. It is a natural desire of human beings to interact with others. Satisfaction of an individual depends largely on the relationship with the group members, group dynamics, group cohesiveness and his own need for affiliation.

Leadership Styles: Democratic leadership style enhances job satisfaction. Democratic leaders promote friendship, respect and warm relationships among the employees.

3.4.1.2 Personal Determinants:

Job satisfaction relates to the psychological factors. Therefore, a number of personal factors determine the job satisfaction of the employees.

Personality: Individual psychological conditions determine the personality. Factors like perception, attitudes and learning determine the psychological conditions. Therefore, these factors determine the satisfaction of individuals.

Age: Age is a significant determinant of job satisfaction. Younger age employees possessing higher energy levels are likely to feel more satisfied. As employees grow older, aspiration levels increase. If they are unable to find their aspiration fulfilled, they feel dissatisfied.

Education: Education provides an opportunity for developing one's personality. It enhances individual's wisdom and evaluation process. Highly educated employees possess persistence, rationality and thinking power. Therefore, they can understand the situation and appraise it positively.

Gender Differences: The gender and race of the employees determine Job satisfaction. Women are more likely to be satisfied than their counterpart even if they are employed in small jobs.

3.5 Organizational Motivation

Zahra and George who claims that firms that focus extensively on learning from and exploring the environment can constantly renew their knowledge stock but cannot benefit from it unless they can exploit what they have learned from their environment.

3.6 University Performance

There is increased emphasis on continuous enhancement in operating standards of institutions and knowledge based industries. Kaplan and Norton (1992) introduced a new dimension to evaluate performance of organizations from a balanced perspective. Karathanos and Karathanos (2005) described how the Baldrige education criteria for performance excellence adapted the concept of

Balanced score card (BSC) to education. Umashankar and Dutta (2007) applied the concept of BSC to higher education programs/institutions in the Indian context while Yu et al. (2009) suggested the use of e-balanced scorecard to assess the performance of academic staff in higher education setting. Studies (Bigliardi and Dormio, 2010; et al., 2005,2005; Zangoueinezhad and Moshabaki, 2011) have described the use of BSC and its application in measuring performance of universities. Liefner (2003) tried to explore the relationship between performance based resource allocation and its effect on performance of universities and revealed that this varies significantly between the universities investigated, proving that the link between the two is weak. Shah and Nair (2011). studied performance of universities in relation to external quality audit and used performance measures which were mostly related to teaching and research. Shin (2009) tried to classify higher education institutions on the basis of performance and took research as the only basis of performance. Shin (2010) explored the impact of performance based accountability on institutional performance taking teaching and research as the two parameters of performance revealing that performance based accountability does not have a strong link with performance.

The Times Higher Education World University Rankings (2016–17) has calibrated a five pillar performance indicator on the basis of which the list of top performing universities of the world has been issued. These five indicators include teaching, research, citations and publications, national and international collaborations and industry relations. As per this framework, the first three pillars of 'Teaching', 'Research' and 'Citations' can be covered under human capital while 'national and international collaborations' and 'Industry relations' can be taken as proxy to relational capital.

Lastly, in review of the extent of previous researches, the proposed present study shall focus on the relationship between POS and Trait EI and examines the extent to which employee organization tenure, age, gender & education moderates the linkages between POS and emotional intelligence towards the development of human capital, which in turn can contribute to gain sustainable competitive advantage by making the policies in accordance with the consequence of the relationship between the select variables.

In relation to human capital formation and impact of select psychological variables on human capital, the researcher synthesized the matrix which is given in appendix 1.

SECTION 4

4 DEFINITIONS OF VARIABLES OF THE PROPOSED RESEARCH STUDY

4.1 Independent Variable

The independent variables proposed to be taken up in this study are emotional intelligence, Perceived organisational support, Satisfaction and Motivation. These are as follows-

4.1.1 Emotional Intelligence

EI reflects the extent to which a person attends to, processes, and acts upon information of an emotional nature intra-personally and inter-personally. The emotional intelligence of the person which includes his/her ability to restrain the negative feelings and focus on positive feelings plays an important role in determining his success.

4.1.2 Perceived Organisational Support

Perceived organizational support is the degree to which employees believe that their organization values their contributions and cares about their well-being and fulfills socio emotional needs. Eisenberger and colleagues used the concept of perceived organizational support (POS), which refers to employees' perceptions about the degree to which the organization cares about their well-being and values their contribution, to describe the social exchange relationship between the organization and its employees (Eisenberger, Huntington, Hutchinson, & Sowa, 1986).

4.1.3 Job Satisfaction

Locke (1984) defined job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences". It is a state where one's needs and one's outcomes match well. To Cranny et al. (1992), "Job satisfaction is a combination of cognitive and affective reactions to the differential perceptions of what an employee wants to receive compared to what he or she actually receives."

4.1.4 Motivation

The positive motivation of young people for their future profession is impossible without sustained motivation for educational and cognitive activity related to the profession. Despite the lack of ability, high learning motivation can play the role of a compensating factor; therefore, in teaching activities, teachers have to focus on shaping (Atamchuk, Kurilo 2018). The approaches to internal and external

motivation distinctions (R. R. Bibrikh at el) and art therapy as a method of healing through creativity (Uelsbi Keroul, Yunh at el) were the methodological and theoretical basis of work. Scientists did not research the problem of the art technique influence on the increase of the academic motivation of employees of HEIs.

4.2 Moderator (Demographic Variables)

4.2.1 Education

Education generally believed contributes to the growth of an economy through acquisition of training skills & social transformation. The formally organized education at the elementary, secondary & higher levels which enhances the skills, knowledge, competencies, creative ideas and technical skills. The major indicators of socio economic development viz. of the growth rate of economy, birth rate, death rate, infant mortality rate (IMR) & literacy rate, are all interconnected. The literacy rate has been the major determinant of the rise or fall in other indicators. There is enough evidence in India to show that a high literacy rate especially in the case of women, co-relates with low birth rate, low IMR & increase in the rate of life expectancy. The skilled & healthy person earn higher income then unskilled & unhealthy person.

4.2.2 Age, Gender, Tenure, Education

The absorptive capacity theorists suggest Age, Gender, Tenure, Education should play a mediating role in the psychological constructs and human capital leading to improved competitive advantage and performance. As the person behave according to their age which consist of maturity level & think accordingly like the older person understands the situations without anxiety & stress while younger person takes the situation with their cognition of anger, stress, hypertension etc. next moderator is gender which shows the different personalities male behaves according to their male dominant nature and previous studies shows that they behave with less emotional intelligence or they have high control over emotions which is sometimes a good sign but sometimes not thinking for customer's emotions is bad for company to hit the need to the customer. The other variables are education and tenure which also affect very highly as person with higher experience in organization does not needed higher amount of organizational support as they are own capable for solving the situations while the new employee needed to have higher perceived organizational support to get connected & motivated to

achieve competitive goals and highly educated person easily balance the emotional intelligence according to the previous studies.

4.3 Dependent Variable

4.3.1 Human Capital

Human capital refers to the skills, capacities, abilities possessed by an individual which permit him to earn income. We can thus regard income he derives from supplying personal services (as opposed to lending money getting property) as the return on human capital possesses, just the construction of machinery, building and the likes creates physical capital. There are five of a total of six points that are important and are linked to the employees, equal importance being given to practically all of them. In order of importance, they are:

(1) Employment under working conditions that ensures safety;

(2) A capacity for teamwork;

(3) Professional qualifications;

(4) Employment stability; and

(5) The capacity to adapt to technological and organizational innovation.

SECTION 5

5.1 Need of the study

Human capital formation plays an important role in economic development. The effective use of physical capital itself is dependent upon human capital. Technical, professional & administrative people require physical capital to make effective use of raw materials resources.

The concept of emotional intelligence has become so popular in the management literature that it has become imperative to understand and leverage it for the sake of enhancing the capacity of human capital in organizations. As the pace of change is increasing and world of work is making ever greater demands on a person's cognitive, emotional and physical resources, this particular set of abilities are becoming increasingly important. Since, majority of the concerns in organization involve people in different roles, emotional intelligence must become a determining factor for their effective management. It has also been found that ultimately it is the emotional and perceived organizational support that we need to identify and measure, if we want to be able to predict performance at

workplace resulting in its effectiveness, thereby enhancing the worth of the human capital. In this scenario, the perceived organizational support possessed by the organization will have a bearing on the extent to which they can actualize their emotional intelligence.

An essential step in constructing EI instruments to meet organizational requirements is to identify precisely the specific contexts, needs, and purposes for which that EI test is being developed. Without sounding trite, different jobs call for varying levels of social and emotional involvement and activity. Disparate occupations also require different types of interpersonal interaction. In some jobs (e.g. nursing) one interacts emotionally with others during most of their time on the job. Inside such professions, there is a real need to have frequent interchanges with clients at an emotional level. Incumbents within these jobs not only need to talk with others face-to-face and exhibit positive, prosaic behavior (e.g. receptionist), but also assess the reactions of others, and attempt to influence others' emotions and motives (e.g. insurance agent). Some jobs require matching one's own behavior to the needs of others (e.g. psychotherapist), creatively influencing others by engaging their emotions, and transforming one's own emotions and also those of others. In other jobs (e.g. mathematician) one interacts with people a smaller percentage of time, such that the need to be able to recognize and manipulate others' feelings is relatively unimportant, but one may need to manage personal frustrations.

It is possible to carry out observation from an employer's point of view. Harter, Schmidt and Hayes (2002) proved a positive correlation between job satisfaction and productivity, profit, safety and fluctuation of employees. Job satisfaction and leadership may include different points of view, such as possibilities for advancement, working circumstances, relations with collaborators, age of occupation, reputation and salary. Thus, this all constitutes the development of human capital as a qualified workforce produces better results in organizational performance through the appropriate development of employees' talent, which enhances employees' engagement and motivation in the long term.

Only satisfied employees can be creative and able to keep the pace dictated by the contemporary labor market. These employees help their companies resist the competition that is coming from a global market. Many companies are already aware of this fact and this is why more specialists evaluate and monitor the level of employee satisfaction with their job. Satisfaction of employees is an emotional

condition of the individual about his/her position at work (Warr & Inceoglu, 2012). The final effect of his/her work depends on his/her satisfaction, which is expressed in profit that the employee creates. Additional factors that are very closely connected with satisfaction are absenteeism and fluctuation. These two factors directly influence successful development and efficiency of any industry, firm, company or institution.

University managers should take into consideration the employees' personal variables such as gender and age in order to assess the use of emotional intelligence in coping with negative feelings at the place of work effectively. The present study intends to determine the relevance of the concept of emotional intelligence to the business organizations and to explore the extent to which it may be possible to utilize this concept as a means of creating a sustainable competitive advantage by attracting, motivating, training and retaining customer conscious employees at all levels of the organization.

Present research shall aim to identify the factors of human capital of a university level faculty members that lead to its enhanced performance. Previous Measurement models indicated that research facilitation, quality of work life, perks for employee retention, faculty commitment and equal employment opportunity are significant predictors of human capital. The importance of research facilitation and research output in creating world class universities by enhancing performance has been included in earlier studies (Altbach, 2013; Huang, 2015; Postiglione, 2013, 2015; Shin and Lee, 2014). With increasing neo liberal policies in higher education, changes in forms of governance and emphasis on academic capitalism, quality of work life and perks provided to the faculty is fast becoming a way to retain and engage talented people at universities. The importance of these factors and practices in universities has been clearly substantiated through previous studies (Ferrer and Morris, 2013; Pick et al., 2012; Taylor, 2013).

Focus of proposed research is on universities as institutions, thereby addressing 'Higher education', one of the components of the 'knowledge concepts' which is the second pillar of the 'knowledge pentagon'. Policymakers in universities have to take cognizance of the fact that when relational capital complements human capital, its overall effect on university performance is favorably enhanced. Furthermore, it will help administrators and policy makers at universities to understand how these

demographic variables can affect the human capital to gain sustained competitive advantage in the prevailing market.

This lays credence to the fact that if universities want to engage their academicians, they need to share governance, focus on job satisfaction, workplace environment and career benefits via investing in human capital.

5.2 Problem Statement

After an extensive and exhaustive review of previous research studies the researcher found the gap that there are limited studies in indian context and a study by Vijayanarayanan A G, "A study on individual human capital formation among millennials in Chennai IT Hub" shows the individual level development of human capital by taking personal characteristics of employed staff in private universities. And the Primary data were collected from Chennai IT Hub Hence, a broad generalization of the findings may not be valid for the whole State or country because of the differences in social and cultural factors in different parts of our country. So it is needed to conduct the study in different state as well especially those states which are having low literacy rate. Also the study is confined to only Millennials in age group between 20 and 35 years. Therefore, it cannot be generalized for all ages, so the age proportion should be extended as it affects the different level of age group for human capital formation according to their learning power. Also the study only covered the educational aspect and not the psychological and behavioural aspects.

The researcher found the gap in the literature that can be addressed through the results and conclusions of this research which will be carried by researcher regarding the impact of psychological constructs on human capital. The research is required because there are many studies on human capital have been carried by different disciplines but relationship of psychological constructs and human capital in universities is still require a valuable focus of researcher. In Indian context, human capital has few concerned studies but there is still gap in the explanation of relationship between psychological constructs and human capital. Researcher will suggest some factors for emotional intelligence and perceived organizational support, satisfaction and motivation on the basis of human skills, well-being, know how in universities. In order to carry the research, public and private universities have been

selected by researcher. In Indian context, the universities increased emphasis on continuous enhancement in operating standards of institutions and knowledge based industries.

In summary, the proposed present study shall focus on the relationship between POS, Trait EI, Satisfaction, and Motivation and examines the extent to which employee organization tenure, age, gender & education moderates the linkage between psychological constructs towards the development of human capital which can contribute to gain sustainable competitive advantage by making the policies in accordance with considering all of them.

The research gap raises these research questions, which will be answered through this research:

1. What is the impact of psychological constructs on human capital in select universities of India?
2. What is the effect of moderators on the relationship between psychological constructs and Human Capital in select universities of India?
3. How does Psychological Constructs affect Human Capital in Faculties of select universities of India?
4. What does the Human Capital really mean to Faculties in select universities of India?

5.3 Objectives

The objectives of the present study are:

- To identify the factors of Emotional Intelligence, Perceived Organizational Support, Satisfaction and Motivation that affects Human Capital.
- To measure the impact of psychological constructs (EI, POS, Satisfaction and Motivation) on Human Capital in select universities of India.
- To identify the moderating effect of demographics (Age, Tenure, Education and Gender) on relationship between psychological constructs and human capital.
- To propose a competitive framework to gain better human capital for a sustained competitive advantage.

5.4 Conceptual Framework and Methodology

In this study the researcher has introduced psychological constructs (EI, POS, Satisfaction and Motivation) considered to explore the impact on Human Capital and the Demographic variables (Age, Gender, Tenure and Education) will be used as moderator. The model will examine the impact of Psychological Constructs and demographics on Human Capital Formation in faculties of Indian Universities.

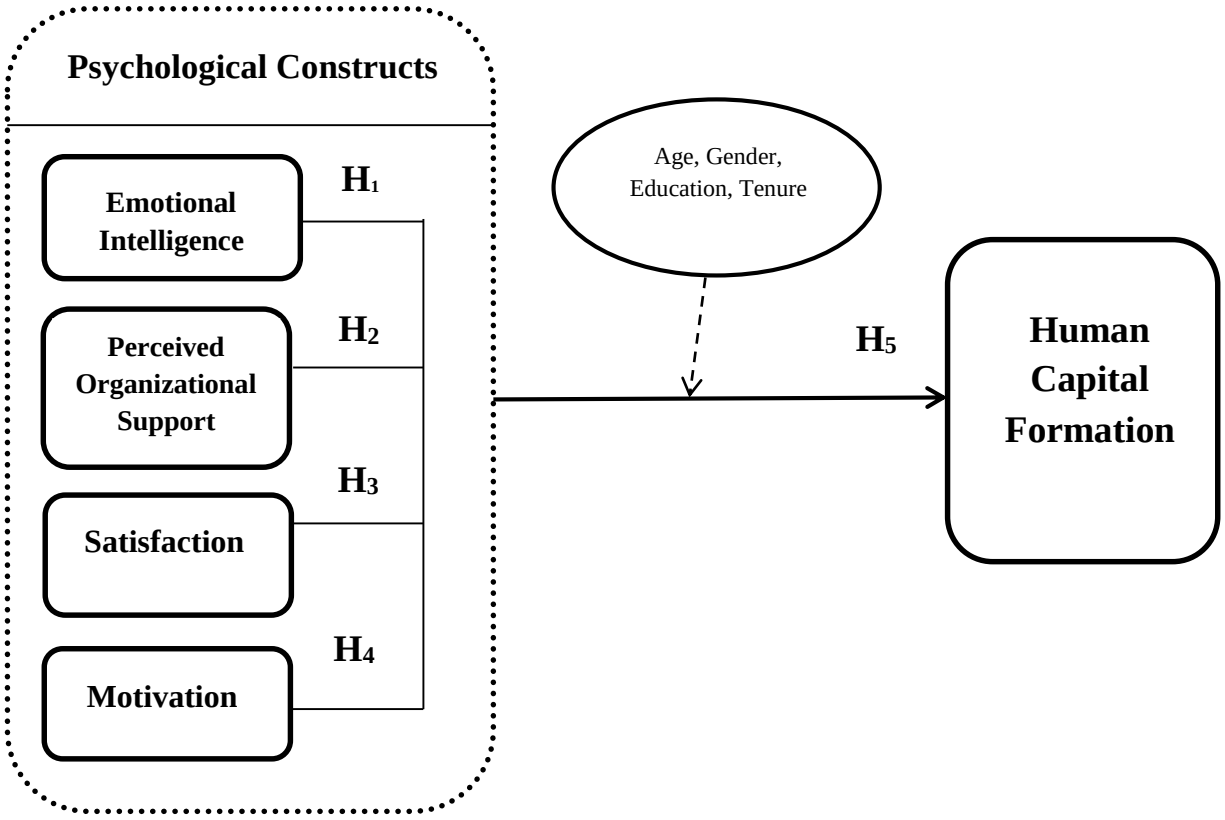

Figure 3 Conceptual Framework (Source: *Author's Compilation)*

The objectives and hypotheses of the study are based on the conceptual framework. In this proposed research, the researcher will carry out the research on the basis of the framework as shown in Figure 3.

5.4.1 Hypotheses Development

The study will be carried out in order to test the following hypotheses. The hypotheses for the study are formulated on the basis of previous studies and relevant literature as well as research questions.

5.4.1.1 Emotional Intelligence and Human Capital

The awareness of emotions as one of the basic components of emotional intelligence (EI) enables individuals to incorporate their emotions into deliberations about what to do and what decision to make (Lambie, 2007). The competence to manage and regulate emotions, another important

component of EI, can help individuals to decide rationally, considering long term goals in their decisions rather than only momentary and immediate rewards. Therefore, it is hypothesized that:

H_1: There is a significant relationship between Emotional Intelligence and Human Capital Formation.

5.4.1.2 Perceived Organizational Support and Human Capital

Employee contribution and caring about employee well-being will increase employee POS, which in turn, will lead to positive employee attitudes and behaviors. Further, it is also proposed that employees' professional commitment will interact with POS to influence the outcomes.

Higher levels of POS, in turn, resulted in lower turnover intention, and a sense of obligation within the individuals to reciprocate the organization with better job performance and stronger organizational commitment.

Employees with higher levels of POS are more likely to repay the organization with positive attitudes and favorable work behaviors (Eisenberger et al., 1986; Eisenberger, Fasolo, & Davis-LaMastro, 1990; Eisenberger, Cummings, Armeli, & Lynch, 1997). Therefore, it is hypothesized that:

H_2: There is a significant relationship between Perceived Organizational Support and Human Capital Formation.

5.4.1.3 Employee Satisfaction and Human Capital

Previous researches suggest that satisfied employees are time-effective at work, likely to minimize their sick leave and have lower turnover intentions (Spector, 1994). Additionally, Meyer *et al*. (2002) identified a significant relationship between job satisfaction and affective commitment. Employee satisfaction predicts the relationship between engagement and affective commitment (Judge and Watanabe, 1993); and energetic and passionate employees due to satisfaction predict committed employees and reduced turnover intentions. Therefore, it is hypothesized that:

H_3: There is a significant relationship between Satisfaction and Human Capital Formation.

5.4.1.4 Motivation and Human Capital

The positive motivation of young people for their future profession is impossible without sustained motivation for educational and cognitive activity related to the profession. Despite the lack of ability,

high learning motivation can play the role of a compensating factor; therefore, in teaching activities, teachers have to focus on shaping (Atamchuk, Kurilo 2018). The approaches to internal and external motivation distinctions (R. R. Bibrikh at el) and art therapy, as a method of healing through creativity (Uelsbi Keroul, Yunh at el) were the methodological and theoretical basis of work. Scientists did not research the problem of the art technique influence on the increase of the academic motivation of employees of Higher Educational Institutions. Therefore, it is hypothesized that:

H_4: There is a significant relationship between Motivation and Human Capital Formation.

5.4.1.5 Demographic variables and Human Capital

Previous researches have revealed that gender impacts upon EI (Ponterotto *et al*., 2011). Van Rooy *et al*. (2006) argued that research is converging on the opinion that females score higher than males on measures of EI. Additionally, Joseph and Newman (2010) supported the view that females score higher on EI. Petrides and Furnham (2006) noted that age interacted with gender such that older females showed higher EI compared with younger females. However, others found insignificant gender differences in relation to EI (*e.g.* Whitman *et al*., 2009). Hence, further research is needed to investigate the effects of age and gender on EI, POS, Satisfaction and Motivation so as to see the total impact of these variables with all independent variables and further the impact on human capital formation. In previous studies the relationship between POS and emotional intelligence is moderated by organization tenure, such that the positive relationship between POS and emotional intelligence will be stronger for employees with less tenure, compared to employees with high tenure. Therefore, it is hypothesized that:

H_5: Tenure, Age, Gender and Education moderate the effect of human capital formation.

5.4.2 METHODOLOGY

This research work shall be exploratory study based on survey technique. In order to make study more reliable, data from both primary and secondary sources will be collected. The primary data will be collected from the selected study sample, using the appropriate sampling techniques followed by the analysis of the results through use of appropriate statistical tools to draw logical inferences and valid conclusion of the research.

5.4.3 SCOPE OF THE STUDY

In order to collect data, sample shall be drawn from **Jiwaji University, Gwalior, GLA University, Mathura and Aligarh Muslim University, Aligarh.** All the universities are selected from the state of Uttar Pradesh and Madhya Pradesh of India.

5.4.4 SAMPLING TECHNIQUE

A good sample is true representative of the population. For the purpose of this study, Judgmental Sampling Method, Snowball Sampling Method will be used to draw representative samples from the population for the study.

5.4.5 STATISTICAL TOOLS

To test the proposed relationships, data will be analyzed using statistical tools like Correlation Analysis, Reliability and Validity, ANOVA (Analysis of Variance) and Regression etc.

5.4.6 CALCULATION OF SAMPLE SIZE

The population from which sample is to be drawn is finite in nature. For calculation of sample size of finite population, first of all, sample size, is to be calculated without considering finite population correction factor. To calculate the sample size without considering finite population correction factor, the following formula is used:

$$\mathbf{n = \sigma^2 . Z^2/D^2}$$

Here, n_0 = Sample size without considering finite population correction factor

σ = Standard Deviation

Z = Standard normal distribution for 95% confidence level equivalent to 1.96 and,

D = Degree of precision desired

Total Population in GLA University is 425 Faculty Members.

Total Population in Jiwaji University is 123 Faculty Members.

Total Population in AMU is 1496 Faculty Members.

Total population size is 2044 faculty members from both public and private universities.

5.4.7 SAMPLE COMPOSITION

The population from which sample is to be drawn is finite in nature. For calculation of sample size of finite population, first of all, sample size, is to be calculated without considering finite population

correction factor. To calculate the sample size without considering finite population correction factor, the following formula is used:

$$n_0 = \frac{\sigma Z^2}{D^2}$$

Here,

n_0 = Sample size without considering finite population correction factor

σ = Standard Deviation

Z = Standard normal distribution for 95% confidence level equivalent to 1.96 and,

D = Degree of precision desired

In order to obtain a representative and realistic sample size, the results of sample size from 3 scenarios are compared:

Scenario 1- Estimating a low standard deviation and low degree of precision.

Scenario 2- Estimating a moderate standard deviation and moderate degree of precision.

Scenario 3- Estimating a high standard deviation and high degree of precision.

Table 3 Comparative Analysis Taking Different Values of σ and D

	SD	**Z**	**D**	**n_0**
Scenario 1	0.5	1.96	0.5	3.84
Scenario 2	1	1.96	0.3	42.68
Scenario 3	1.5	1.96	0.1	864.36
Total				**910.89**
Average				**303.62**

Taking an average of the all the three scenarios, considered taking different values of σ and D, sample size without considering finite population correction factor is computed to be 304.

As the population computed here is 304, it would be sensible to purge it slightly more a given sample size provides more information for a small population than for a larger population. We fill further chisel down the figure by considering 2037 faculty members while the collecting data. Hence, we further use the equation-

$$n = \frac{n_0 N}{n_0 + N - 1}$$

Here;

N (Population Size) = 2044

n0 (Sample Size) = 265

n = Adjusted Finite Sample Size

As we apply the figures in the above equation, the required adjusted finite sample size outputs to **265** which will be taken while undergoing the research. It is divided into the ratio as 4:1:12.

Table 4 Sample Frame

PLACE	SELECTED UNIVERSITIES	NUMBER OF FACULTY MEMBERS TO BE SELCTED
MATHURA	GLA University	62
GWALIOR	Jiwaji University	16
ALIGARH	AMU	187

5.4.8 Sources of Data Collection

5.4.8.1 Primary Data

The tool for the purpose of primary data collection will be Questionnaires. Structured Questionnaire will be administered in order collect data from the respondents. The Questionnaire will be distributed to the employees of the selected universities of India.

5.4.8.2 Secondary Data

Data will be collected through various magazines, newspapers, internet and libraries. The already available researches related to the fields of psychological constructs and human capital will be used to design the questionnaires for primary data collection.

SECTION 6

6.1 CHAPTERIZATION

The structure of proposed research will be as follows:

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Research Methodology

Chapter 4: Analysis and Results

Chapter 5: Conclusions and Directions for Future Research

SECTION 7

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APPENDIX.1 LITERATURE REVIEW SYNTHESIZED MATRIX

S. No.	Paper Author	Intellectual Capital	University Performance	Human Capital	Emotional Intelligence	Perceived Organisational Support	Age, Gender	Leadership	Employee Satisfaction	Competitive advantage
1	Amjad Iqbal, 2018	✓			✓					
2	Bernadette Cross, 1993	✓			✓	✓				
3	David G. Allen, 2002	✓			✓					
4	Denizci, 2006	✓			✓					
5	G.O. Oriarewo1, 2019	✓			✓					✓
6	Juarez Domingos Frasson Vidotto, A human capital measurement scale, 2017			✓		✓				✓
7	K. V. Petrides, 2018	✓			✓					

8	Kaliski 2007						+		✓	
9	Karakuş, 2012	✓		✓						✓
10	Lara Agostini, 2017			✓						✓
11	Leonidas A. Zampetakis, 2009			✓						
12	Liu, 2004	✓				✓				
13	Livio Cricelli, 2018						✓			
14	Macarena López-Fernández 2018			✓				✓		+
15	Manish Gupta, 2017	✓			✓					
16	Maria-Jose Sanchez-Ruiz, 2012	✓		✓				✓		
17	Moshe Zeidner, 2004			✓		✓				
18	Neil Humphrey, 2007	✓		✓		✓		+		
19	Osama Al-Kurdi, 2018	✓		✓			+			✓
20	Renato Passaro, 2018						✓			
21	SCHULTZ, 1961	✓		✓						✓
22	Singh, 2010			✓						
23	Wan, 2007	✓			✓					
24	Watkin, 2000			✓				✓		